

ABSTRACT OF THE INVENTION

Recombinant DNA vectors and methods for cloning and expressing nucleic acid molecules by using a combination of site-specific recombination and end-to-end joining or linking of nucleic acid molecules, such as endonuclease restriction digestion and ligation. The DNAs, vectors and methods can be used for inserting, exchanging, transferring a variety of DNA segment (s) both *in vitro* and *in vivo*. Also disclosed are linker molecules and methods using these linkers the can be used for cloning a gene of interest into an expression vector in one-step. The linker sequences comprise adapter sequences for cloning purposes, as well as eukaryotic and prokaryotic ribosome binding sites for increase translation efficiency.